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27

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/874,591	06/05/2001	James D. Keeler	PAVI-25,759	6543

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EXAMINER

BOOKER, KELVIN E

ART UNIT PAPER NUMBER

2121

DATE MAILED: 07/07/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/874,591

Applicant(s)

KEELER ET AL.

Examiner

Kelvin E Booker

Art Unit

2121

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☒ Other: *Detailed Office Action*.

DETAILED ACTION

Specification

1. The abstract of the disclosure is objected to because the disclosure exceeds 150 words in length. Correction is required. See MPEP § 608.01(b).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 21-32** are rejected under 35 U.S.C. 102(e) as being anticipated by Keeler et al., U.S. Patent No. 6,002,839 [hereafter Keeler].

As per claim 21, Keeler teaches of a method for determining an output value having a known relationship to an input value with a predicted value, comprising the steps of:

A. training a predictive model with a set of known outputs for a given set of inputs that exist in a finite dataset (see Abstract, lines 1-17; and column 16, lines 26-36: training a prediction model respective of outputs);

B. inputting data to the predictive model that is within the set of given inputs (see column 16, lines 29-33; and column 18, lines 14-17: inputting data into the predictive model); and

C. predicting an output from the predictive model that corresponds to the given input such that a predicted output value will be obtained which will have associated therewith the errors of the predictive model (see column 18, lines 17-26: predictive output whereby minimizing errors presents an accurate representation of system model).

As per claim 22, Keeler teaches of a method wherein the predictive model is a non-linear model (see column 4, lines 47-51; and column 16, lines 9-14: non-linear training model).

As per claim 23, Keeler teaches of a method wherein the set of known outputs for a given set of inputs is derived from at least one physical property table (see column 15, line 61; column 16, lines 3-5; and figure 15(a), element 176: table containing preprocess data).

As per claim 24, Keeler teaches of a method wherein the set of known outputs for a given set of inputs is derived from a plurality of physical property tables (see columns 11-13: table data).

As per claim 25, Keeler teaches of a method wherein the predictive model includes at least one input that is a discriminating input to define which of said tables is associated with the inputs, such that processing the input through the predictive model will process it through a learned representation of only that table (see column 11).

As per claim 26, Keeler teaches of a method wherein the predictive model is trained on less than all of the data in the physical property tables (see column 16, lines 33-42: data adjustments based upon training algorithm).

As per claim 27, Keeler teaches of a method for defining the relationship of output variables to input variables in a spreadsheet, comprising the steps of:

A. defining a set of input variables (see Abstract, lines 14-17: defining preprocess parameters during training);

B. defining at least one output variable that has a known relationship with the input variables, which known relationship between the output variables and the input variables is contained in a dataset (see Abstract, lines 14-17: defining output variables respective of inputs); and

C. determining the value of the output variable from the input variable by mapping the input variable through a stored representation of the dataset in a predictive model to predict the output variable from the stored representation and replacing the previous value of the corresponding output variable with the predicted value for the output variable (see column 19, line 51 through column 20, line 3).

As per claim 28, Keeler teaches of a method wherein the step of mapping comprises mapping the input variable through a stored representation of the dataset in a nonlinear predictive model (see column 4, lines 47-51; and column 16, lines 9-14; and column 19, lines 54-57: mapping within a non-linear training model).

As per claim 29, Keeler teaches of a method wherein the stored representation represents less than all of the data within the dataset (see column 16, lines 33-42: data adjustments based upon training algorithm column).

As per claim 30, Keeler teaches of a method wherein the dataset comprises a physical property table and the input variables and the output variables comprise physical properties that are within the physical property table (see figure 15(a), element 176).

As per claim 31, Keeler teaches of a method wherein there is a known output within the dataset for each of the input variables utilizing the step of determining (see figure 9, element 142).

As per claim 32, Keeler teaches of a method wherein the step of determining is initiated in response to the input of a change to any one of the defined set of inputs, wherein the inputs and outputs are arranged in columns and rows in the spreadsheet (see column 4, lines 8-20: data formats for manageability).

Conclusion

4. An inquiry concerning this communication or earlier communications from the examiner should be directed to Kelvin Booker whose telephone number is (703) 308-4088. The examiner can normally be reached on Monday-Friday from 7:00 AM-5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee, can be reached on (703) 305-8498. The fax number for the organization where this application or proceeding is assigned is (703) 746-7239.

An inquiry of a general nature or relating to the status of this application proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Application/Control Number: 09/874,591

Page 6

Art Unit: 2121

K.E.B.

Art Unit 2121

June 26, 2003


PAUL P. GORDON
PRIMARY EXAMINER